



Operation/Reference Guide

DAS-SIRIUS

SIRIUS[®] Tuner Module
for Mi-Series Audio Controllers



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All products returned to AMX require a Return Material Authorization (RMA) number. The RMA number is obtained from the AMX RMA Department. The RMA number must be clearly marked on the outside of each box. The RMA is valid for a 30-day period. After the 30-day period the RMA will be cancelled. Any shipments received not consistent with the RMA, or after the RMA is cancelled, will be refused. AMX is not responsible for products returned without a valid RMA number.

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- The AMX Authorized Partner must contact AMX Technical Support to validate the failure before pursuing this service.
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- Non-warranty repair is a billable service.
- Products repaired under this policy will carry a ninety (90) day warranty on material and labor.
- AMX will notify the AMX Authorized Partner with the cost of repair, if cost is greater than the Standard Repair Fee, within five (5) days of receipt.
- The AMX Authorized Partner must provide a Purchase Order or credit card number within five (5) days of notification, or the product will be returned to the AMX Authorized Partner.
- The AMX Authorized Partner will be responsible for in-bound and out-bound freight expenses.
- Products will be repaired within ten (10) business days after AMX Authorized Partner approval is obtained.
- Non-repairable products will be returned to the AMX Authorized Partner with an explanation.
- See AMX Non-Warranty Repair Price List for minimum and Standard Repair Fees and policies.

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DAS-SIRIUS Tuner Module

Overview

Add Sirius satellite radio functionality to your AMX Distributed Audio system with the DAS-SIRIUS Satellite Radio Tuner Module (**FG1110-02**).

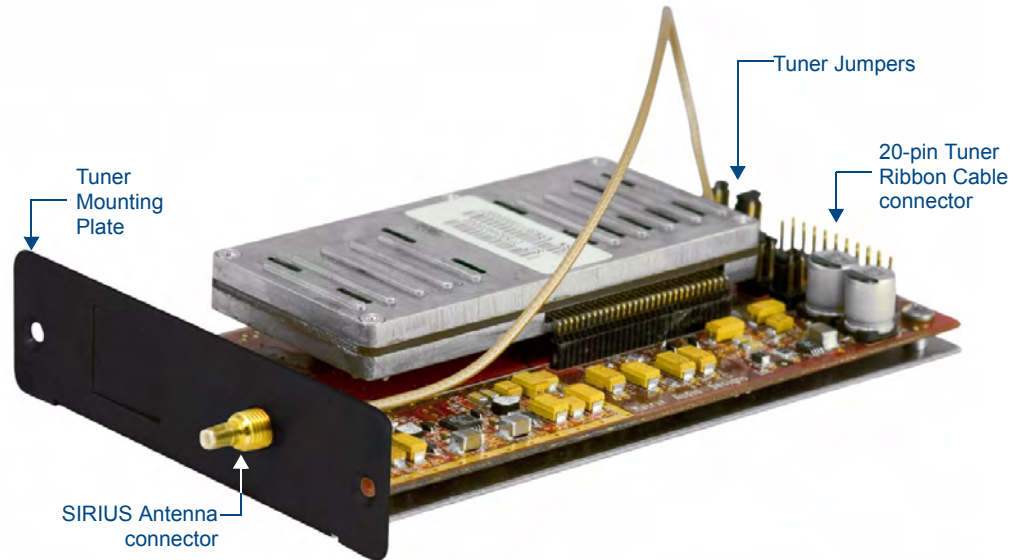


FIG. 1 DAS-SIRIUS Satellite Radio Tuner Module



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- The DAS-SIRIUS Tuner Module can be used with both Mi-Series and Tango Audio Controllers.
- All Mi-Series and Tango Audio Controllers come equipped with a DAS-AMFM AM/FM Tuner Module. Since Mi-Series and Tango Audio Controllers support 2 Tuner Modules in any combination, the DAS-SIRIUS Module can either be installed in addition to the DAS-AMFM Module, or the DAS-AMFM Module can be removed to allow 2 DAS-SIRIUS Modules.
- Each Tuner Module uses 1 source input on the Audio Controller.

Installation

Installing/removing Tuner Modules requires removing the cover from the Audio Controller, removing the Tuner Option cover plate from the rear panel of the Controller, installing the Tuner Module, and setting Jumpers on both the Tuner Module (to specify each Tuner Module as either TUNER 1 or TUNER 2), and the rear board pin-bus of the Audio Controller (to enable/disable Tuner Module slots 1 and 2).



Disconnect all power sources before opening the chassis. Failure to disconnect power before performing this installation may cause injury or death.

FIG. 2 provides orientation for the various internal components that must be accessed to install the Tuner Module and set the Jumpers.

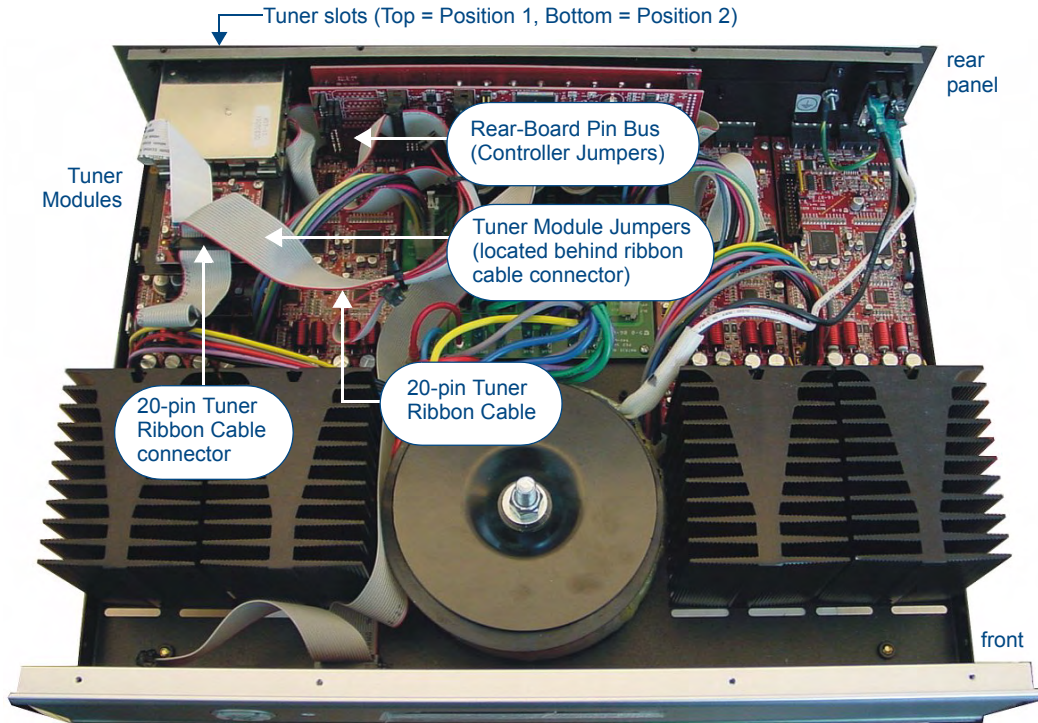


FIG. 2 Audio Controller - Internal view



Make sure to discharge all static electricity from your body before touching any components of the Tuner Modules or the Audio Controller. Failure to do so may lead to permanent damage to the Tuner or Controller.

Setting the Jumpers

While Mi-Series and Tango Audio Controllers support 2 Tuner Modules in any combination, this document primarily describes installing the DAS-SIRIUS Tuner Module into Position 2 on the Audio Controller (as TUNER 2), leaving the DAS-AMFM Tuner Module in position 1 (as TUNER 1).



Because of the location of the Jumpers in the Controller and on the Tuner Module, it may be easier to make all jumper settings before installing the Tuner Module in the Controller.

Audio Controller Jumpers - Location

Examine the configuration of the jumpers on the left-side Rear-Board Pin Bus, as seen when viewing the rear board from the front of the Controller (FIG. 3).



FIG. 3 Audio Controller - Rear-Board Pin Bus / Jumpers

Audio Controller Jumpers - ON/OFF Settings

- ON position = pins 3 and 2 jumpered (with pin 1 exposed).
- OFF position = pins 2 and 1 jumpered (with pin 3 exposed).

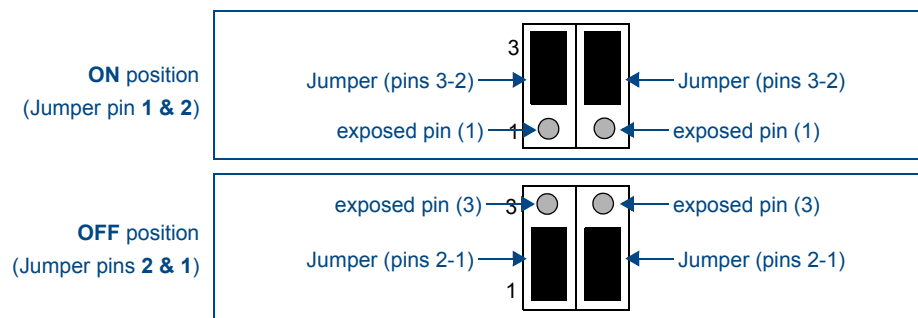


FIG. 4 Controller Jumper Settings

Audio Controller Jumpers - Dual Tuner Setting

With the DAS-AMFM Tuner Module installed in position 1, and the DAS-SIRIUS Tuner Module installed in position 2, the Audio Controller jumpers should all be set to ON, as shown in FIG. 5:

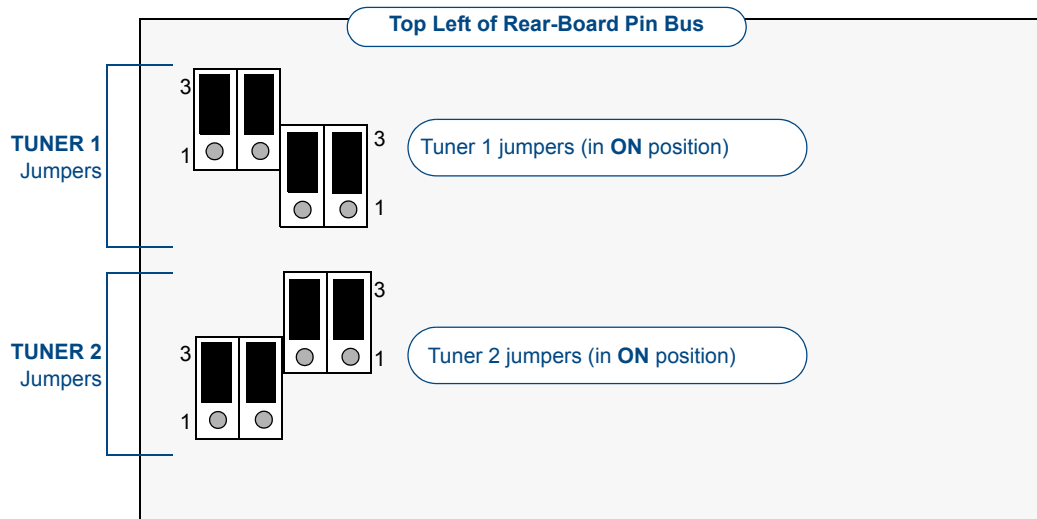


FIG. 5 Audio Controller Jumper Configuration (Dual Tuners)

Move the TUNER 2 jumpers to the ON position by connecting the top 2 sets of pins (pins 3-2) and leaving the bottom pins (pin 1) exposed.

DAS-SIRIUS Tuner Module Jumper Settings (Standard Installation)

There are 2 sets of Jumpers on the DAS-SIRIUS Tuner Module (FIG. 6). These must be set to differentiate Tuner 1 from Tuner 2 in the Controller.

Since Mi-Series and Tango Audio Controllers are shipped with a DAS-AMFM Tuner Module pre-installed in position 1, as **Tuner 1**, the DAS-SIRIUS Tuner Module, is typically installed in position #2 (labeled *Tuner Option*), as **Tuner 2**.

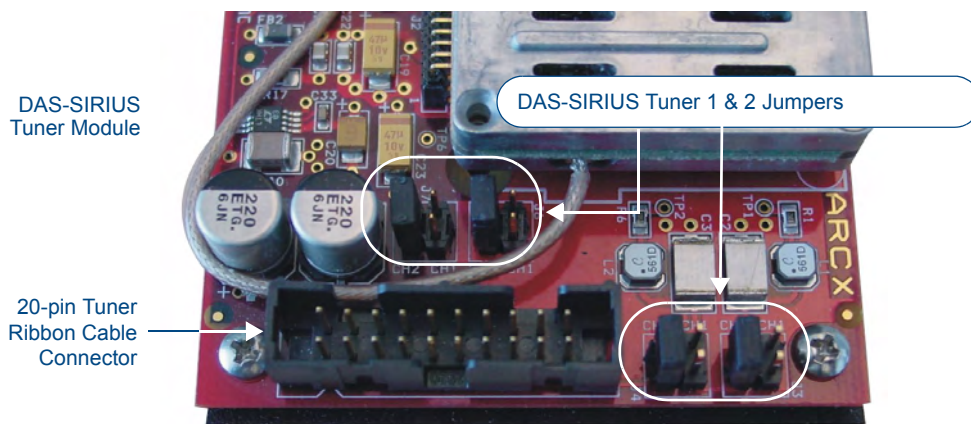


FIG. 6 DAS-SIRIUS Tuner Module - Tuner 1 & 2 Jumper locations

Tuner 1 Jumper Settings

The Tuner Module installed in position 1 must be set to Tuner 1, as shown in FIG. 7:

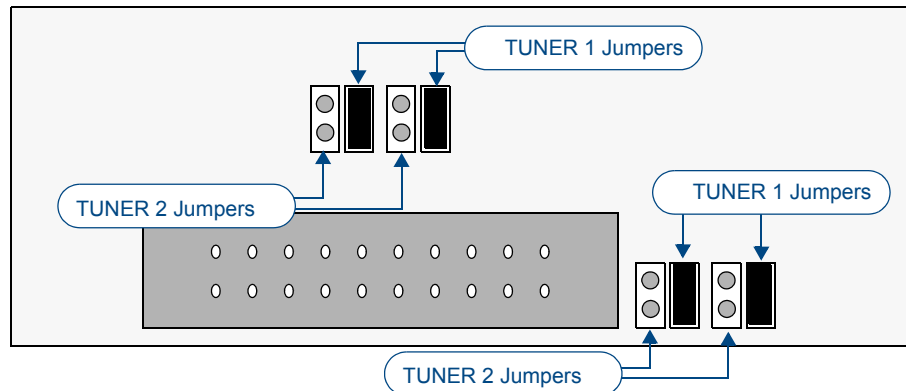


FIG. 7 Tuner Module - Tuner 1 Jumper Configuration

Tuner 2 Jumper Settings

The Tuner Module installed in position 2 must be set to Tuner 2, as shown in FIG. 8:

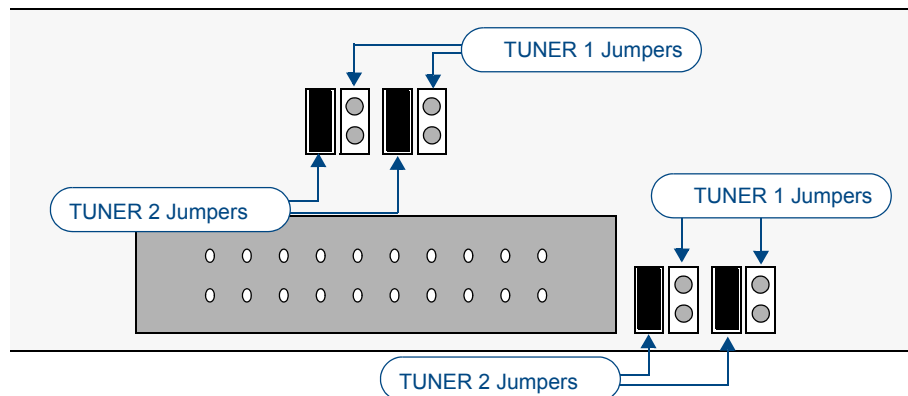


FIG. 8 Tuner Module - Tuner 2 Jumper Configuration

Installing the DAS-SIRIUS Tuner Module

Since Mi-Series and Tango Audio Controllers are shipped with a DAS-AMFM Tuner Module pre-installed in the **Tuner 1** position (on the rear panel of the Controller - see FIG. 9), the DAS-SIRIUS Tuner Module, is typically installed in position #2 (labeled **Tuner Option**).

Installing the DAS-SIRIUS Module Into Position 2

To install the DAS-SIRIUS Tuner Module into the Position 2 Tuner slot:

1. Remove the cover from the Audio Controller.
2. Remove the **Tuner Option** cover plate on the rear panel (FIG. 9) to expose the Position 2 mounting slot for the Tuner Module.
3. Carefully insert the DAS-SIRIUS Tuner Module into the Controller, with the electronics facing up, and replace the cover plate screws to secure the Module to the Controller.

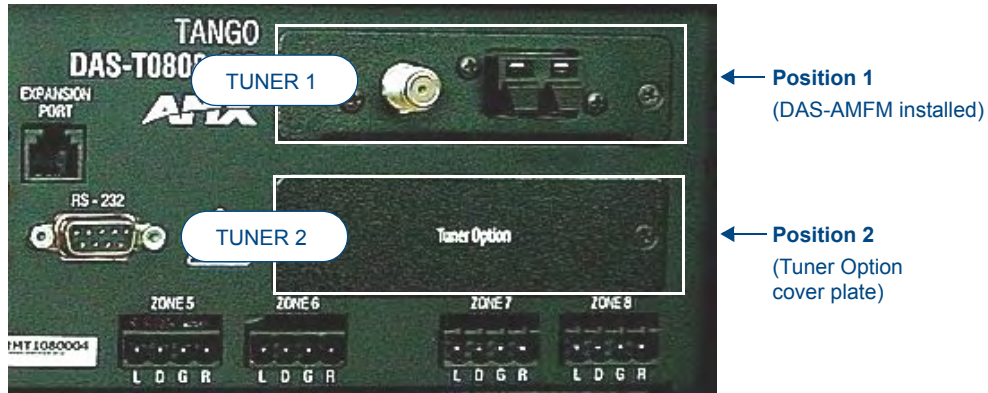


FIG. 9 Rear Panel Tuner with Tuner Option cover plate



Be careful not to damage the white ribbon cable on the top of the Tuner Module.

- The *Rear Panel* connector at the end of the Tuner Ribbon Cable is connected to the Controller’s rear board pin-bus (see FIG. 2).
- Keep the Tuner Ribbon Cable oriented so that the red stripe is always on top, as indicated in FIG. 10:

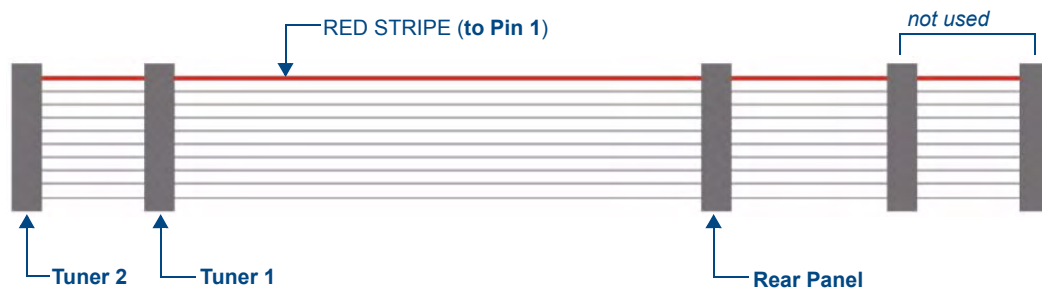


FIG. 10 Tuner Ribbon Cable

4. Connect the **Tuner 2** connector on the ribbon cable to the 20-pin Tuner Ribbon Cable connector on the DAS-SIRIUS Module (FIG. 11).
 - Keep the Tuner Ribbon Cable oriented so that the red stripe is always on top, as indicated in FIG. 10.
 - Verify that all of the 20-pin connectors of the Tuner Ribbon Cable are securely plugged into their respective boards.
5. The Controller should only be powered back on once all Tuners are installed.

Removing Tuner Modules

In some cases it is necessary to remove the existing Tuner Module, in order to install a different Tuner Module. Since each Tuner Module uses 1 source input on the Audio Controller, you may choose to use the source input for other purposes.

1. Remove the cover from the Audio Controller.
2. Carefully remove the ribbon cable from the Tuner Module.
3. Remove the screws from the Tuner Module cover plate (on the Controller’s rear panel) and carefully slide the Tuner Module out of the chassis.

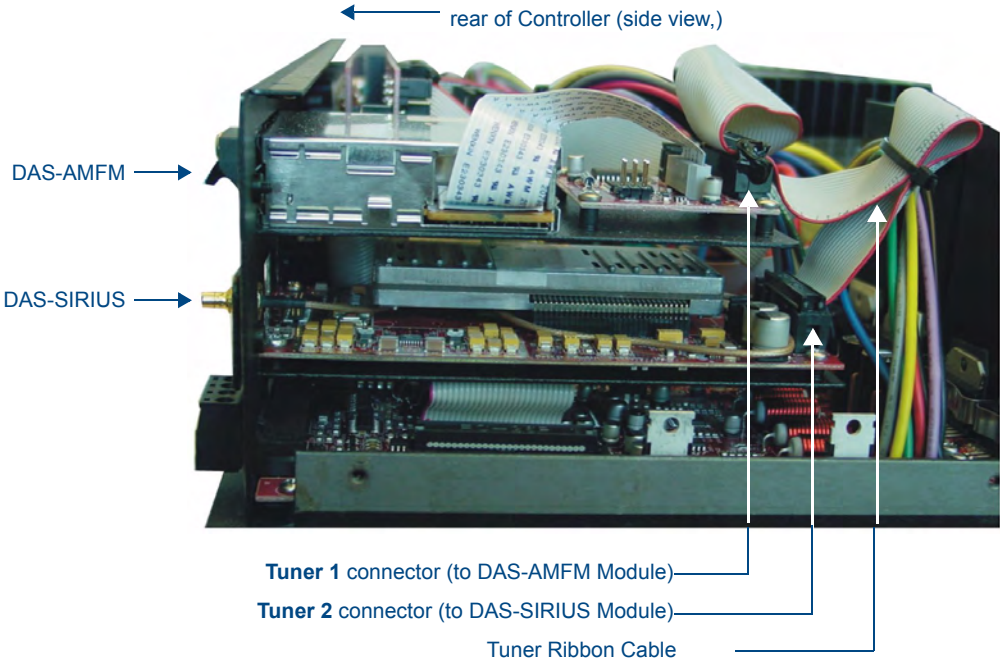


FIG. 11 Tuner 1 / 2 Module Connections (side view of Controller)

- 4. To remove TUNER 1, place the TUNER 1 Audio Controller jumpers in the OFF position (FIG. 12).

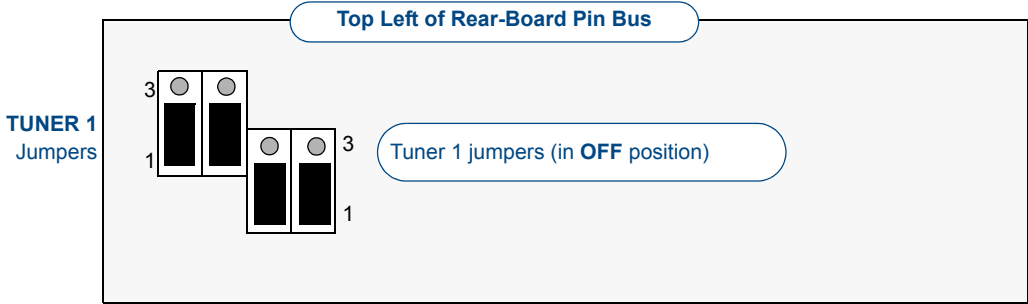


FIG. 12 Audio Controller Jumper Configuration (No TUNER 1)

- 5. To remove TUNER 2, place the TUNER 2 Audio Controller jumpers in the OFF position (FIG. 13).

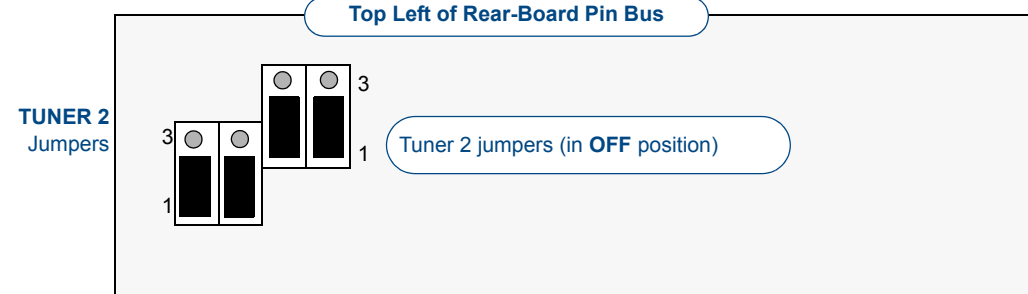


FIG. 13 Audio Controller Jumper Configuration (No TUNER 1)

- 6. To remove both Tuner Modules, set all Audio Controller jumpers in the OFF position.

Connecting and Positioning the SIRIUS Antenna

1. Connect the provided SIRIUS Antenna to the DAS-SIRIUS (see FIG. 1).
2. Verify the Signal strength
 - a. Access the programming menus via the front of the Controller.
 - b. Select Setup\SIRIUS.
 - c. Select "Status". In this menu, you can check the following:
 - "ANT = Antenna Status"
 - "ACT = Activation Status"
 - "SAT = Satellite Signal"
 - "TER - Terrestrial Signal"
 - d. Select "SAT" to determine the Satellite Signal Strength. Values are "None", "Weak" and "Good".
 - e. Ensure the signal strength is at a minimum of "weak". Adjustments may need to be made to the position of the Antenna in order to get a better signal.

Activating Your SIRIUS Subscription

SIRIUS Satellite Radio is a subscription service. In order to use your DAS-SIRIUS module, you will have to activate your SIRIUS subscription.



NOTE

Until you have activated your subscription, you will only be able to tune to channels 0 and 184.

1. Once you have installed the DAS-SIRIUS module, you can activate your SIRIUS subscription by phone: Call 1.888.539.SIRIUS (7474).
2. You will be asked for a "Sirius ID". This ID can be found in several places:
 - If using a Matrix LCD keypad, select channel "0" to display the Sirius ID.
 - If using either a Metreau or Matrix tactile keypad with the optional numeric keypad, select channel "0". The Sirius ID will be displayed on the LCD display on the front of the Controller.
 - If using either a Metreau or Matrix tactile keypad without the optional numeric keypad, access the programming menus via the front of the Controller by pressing the centre Nav button on the Controller: Select Setup\SIRIUS, then select "ID" from the SIRIUS menu, and the SIRIUS ID will be displayed.

Mi Series – SIRIUS Setup screen

Accessing the SIRIUS Setup Screen

1. To access the SIRIUS menus on the Controller, press the *SELECT* button on the front of the Controller. The following screen will be displayed (FIG. 14):



FIG. 14 Mi Series Controller - Main Menu

2. Select **Setup** to display the *System Setup Mode* screen. If an on-board DAS-SIRIUS module is detected, *SIRIUS* is displayed on this screen.
3. Select **SIRIUS** (FIG. 15).

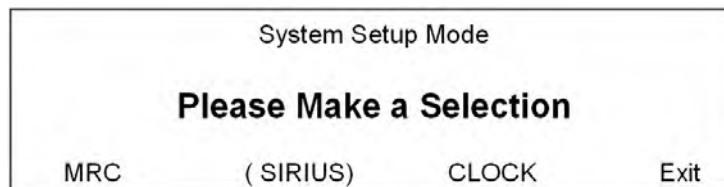


FIG. 15 System Setup Mode menu



NOTE

Use the Navigation button array (<</ >>) on the front of the Controller to navigate through the menus, and the “SELECT” button to make a selection.

If there are two SIRIUS modules on-board, there is an additional screen that allows you to choose between the two (FIG. 16):

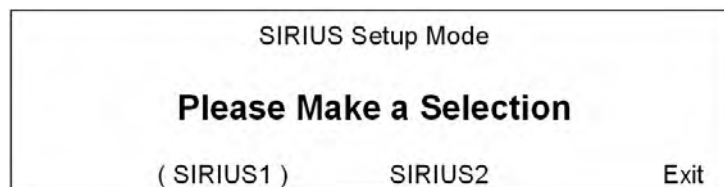


FIG. 16 SIRIUS Setup Mode menu (for Controllers with two DAS-SIRIUS modules on-board)

SIRIUS Setup

1. When *SIRIUS* is selected, the SIRIUS Setup screen is displayed (FIG. 17):

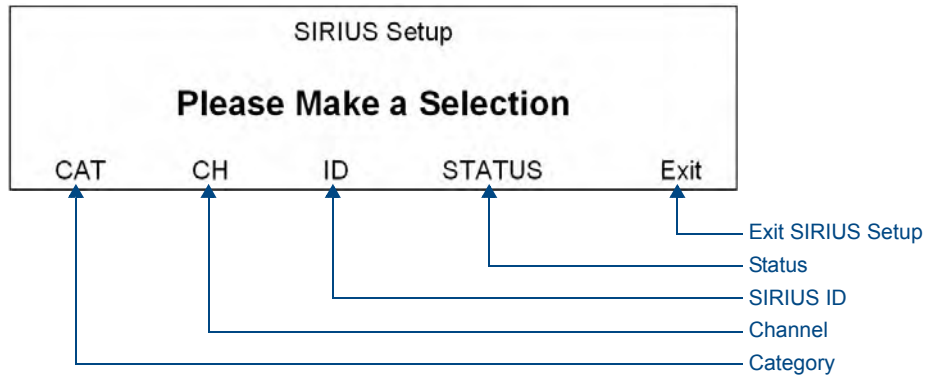


FIG. 17 SIRIUS Setup screen

The options on this page are described in the following sub-sections:

SIRIUS Setup - CAT

Selecting **CAT** (*Category*) displays the following screen (FIG. 18), where the *Category* can be selected by choosing PREV/NEXT. The default = **1 All**.

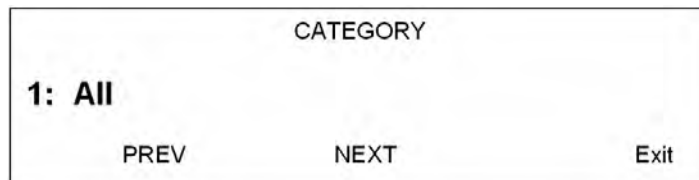


FIG. 18 SIRIUS Category screen



NOTE

Category will be updated to the LCD keypads after exiting the Controller setup screens.

SIRIUS Setup - CH

Selecting **CH** (*Channel*) will display the following screen (FIG. 19), where a *Channel* can be selected by choosing PREV/NEXT.

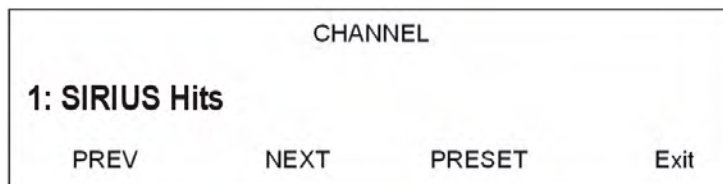


FIG. 19 SIRIUS Channel screen



NOTE

Channel will be updated to the LCD keypads after exiting the Controller setup screens

Presets can be set via this screen if the installer chooses. There are 10 available preset positions. Presets can also be set at the keypad.

SIRIUS Setup - ID

Selecting **ID** displays the SIRIUS ID (FIG. 20).

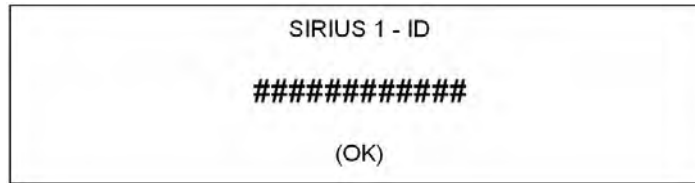


FIG. 20 SIRIUS ID screen

SIRIUS Setup - Status

Selecting **STATUS** will display the following SIRIUS status screen (FIG. 21):

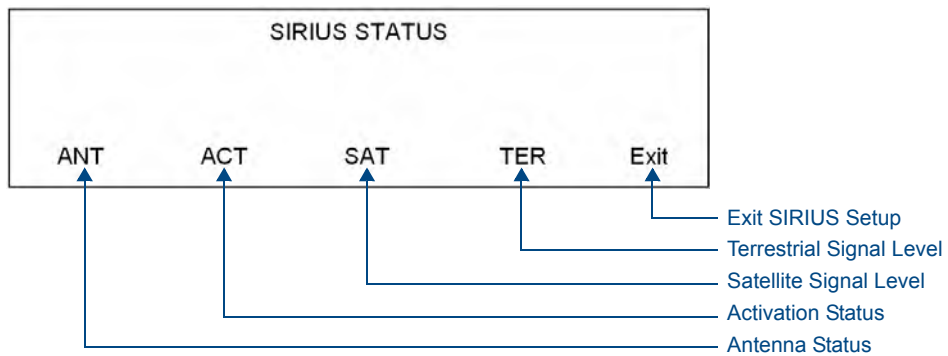


FIG. 21 SIRIUS Status screen

Controlling SIRIUS via the LCD Keypad

Overview

The LCD keypad is a full touch screen keypad with two tactile buttons that are used for Volume UP/DOWN. There are 3 LCD screens for the SIRIUS Source (FIG. 22):

- **HOME** screen User can select any of the available sources
- **MAIN** screen Displays metadata, including: *Channel #, Channel Name, Artist, Song Title & Composer* and any *SIRIUS messages*.
The options on this screen allow the user to Channel UP/DOWN, recall presets, and direct numeric control.
- **MORE** screen Displays metadata: Channel #, Channel Name, Artist, Song Title & Composer and any SIRIUS messages.
The options on this screen provide access to the *Channel List* and *Category List* screens, and allow the user to view and select Channels and Categories from a list, set Presets and Favorites and access the NUMERIC screen for direct numeric control

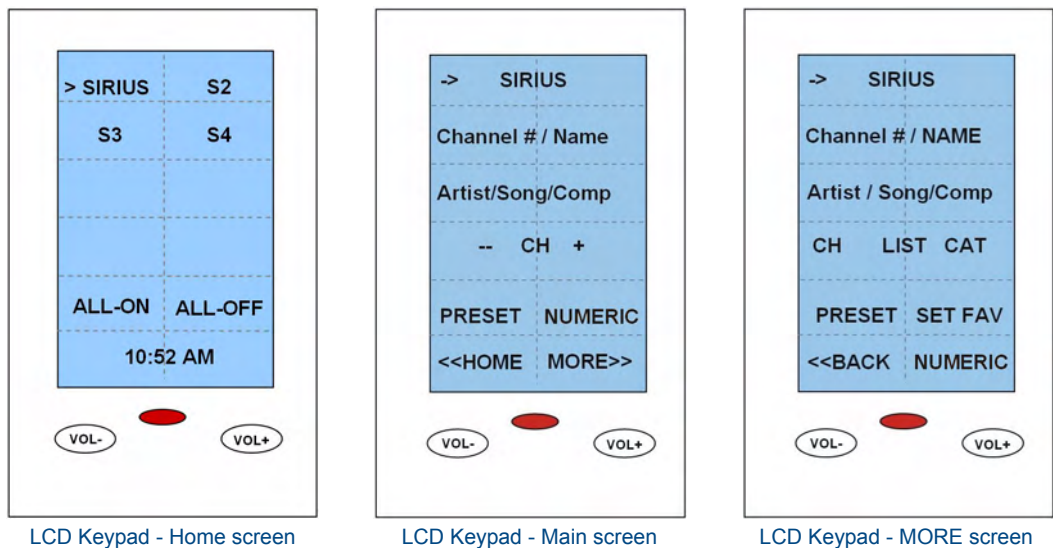


FIG. 22 LCD Keypad - SIRIUS screens

Selecting SIRIUS as the Audio Source

On the *Home* screen, SIRIUS will appear in the top left touch field and is considered to be **Source 1** (FIG. 23).

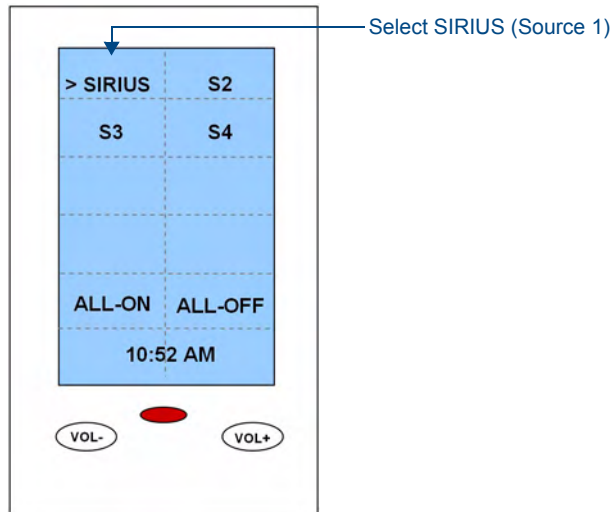


FIG. 23 LCD Keypad - Home screen

- To turn ON the SIRIUS source, touch the text “SIRIUS”. The screen will change to the SIRIUS Main Screen and the > icon appears in front of the text to indicate that SIRIUS is ON in that room.
- Volume UP to the desired volume level.

SIRIUS SAT Main screen

There are two lines of metadata display on the LCD Keypad with a maximum display of 14 characters per line (FIG. 24).

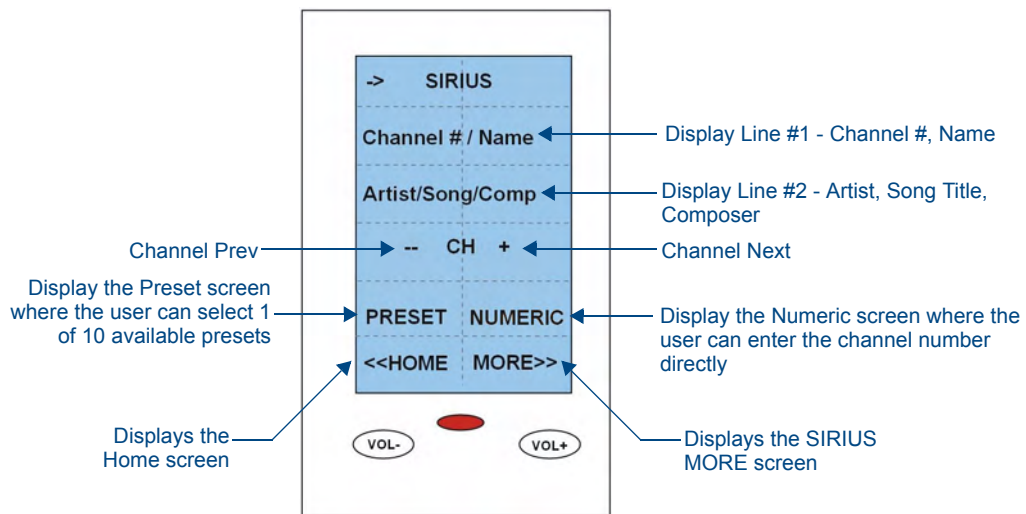


FIG. 24 LCD Keypad - SIRIUS SAT Main screen

Display Line #1 Channel # & Channel Name

Channel # + Channel Name will be displayed up to a max. of 14 characters.

- This display line scrolls once and stops.
- Touch the line of text to update the text and scroll the info once.

Display Line #2 Artist Name, Song Title & Composer

The Artist, Song Title & Composer are displayed up to a max. of 14 characters.

- This display line scrolls once and stops.
- Touch the line of text to update the text and scroll the info once.

Channel - / Channel +

- Touch **Channel -** to select the previous channel/station and begin playing.
- Touch **Channel+** to select the next channel/station and begin playing.

SIRIUS Preset screen

Touch **Preset** on the *SIRIUS SAT Main* screen (FIG. 24 on page 14) to display the *Preset* screen where the user can select 1 of 10 available presets (FIG. 25).

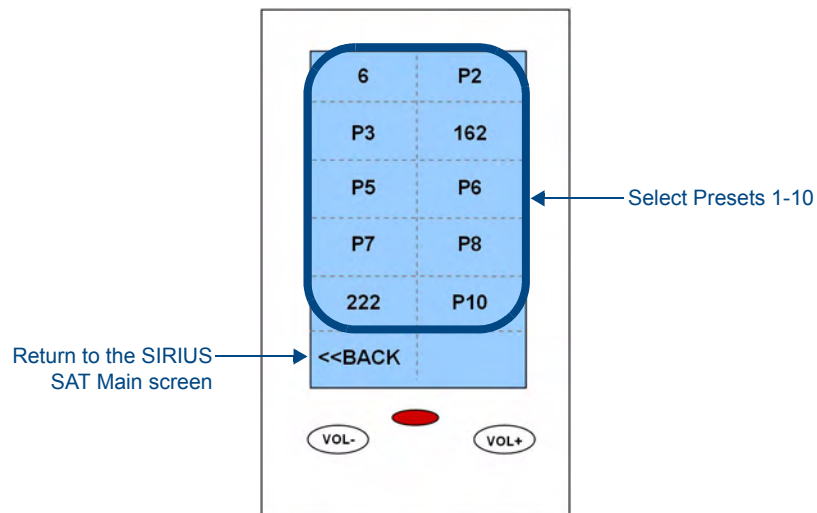


FIG. 25 LCD Keypad - SIRIUS Preset screen

SIRIUS NUMERIC screen

Touching **NUMERIC** on the *SIRIUS SAT Main* screen (FIG. 24 on page 14) displays the standard Numeric screen where the user can directly key in the Channel of their choice (FIG. 26).

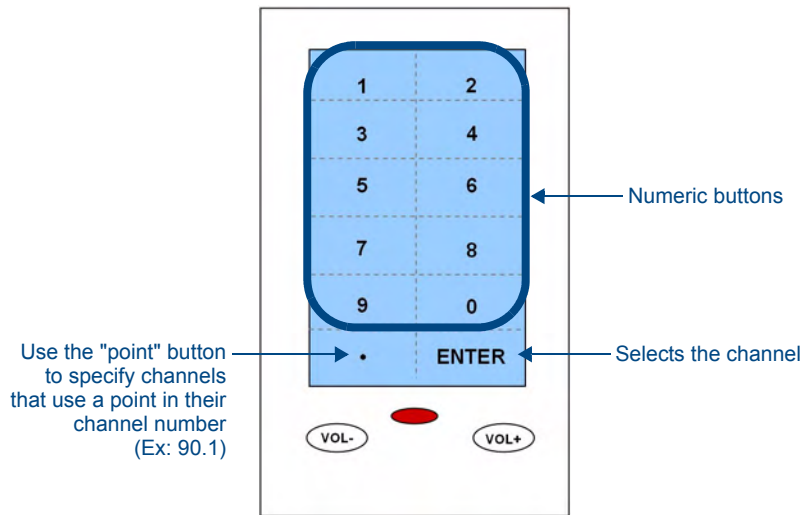


FIG. 26 LCD Keypad - SIRIUS NUMERIC screen

Press the numeric buttons to specify a channel number, and press **Enter** to select. When the Channel is selected:



SIRIUS Satellite Radio does not utilize points for its channels. Therefore, the "point" button is used for other Source types (such as AM/FM tuner, CD, etc.), but not for SIRIUS channels.

- The *SIRIUS MAIN* screen is displayed, and the Channel selected begins playing.
- The *Channel #, Channel Name, Artist, Song Title & Composer* are displayed.

SIRIUS MORE>> screen

Touch **MORE** on the *SIRIUS SAT Main* screen (FIG. 24 on page 14) to display the *SIRIUS MORE* screen (FIG. 27).

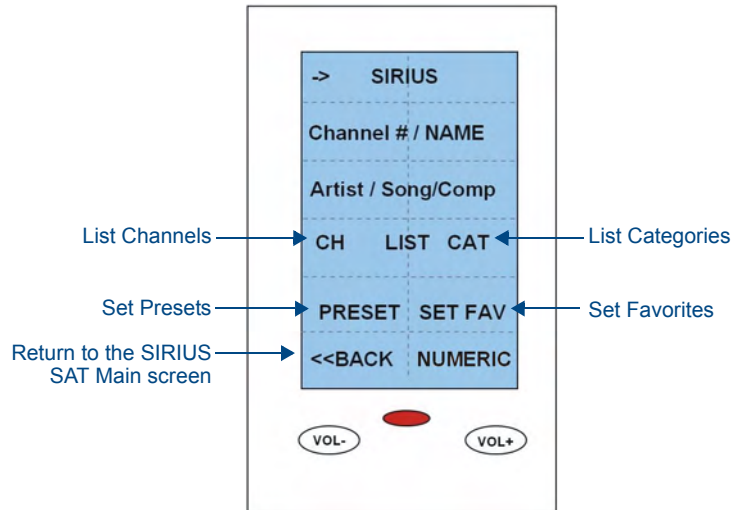


FIG. 27 LCD Keypad - SIRIUS MORE screen

The options on this screen allow the user to perform the following:

- List Channels
- List Categories
- Set Presets
- Set Favorites

List - Channels

Touch **CH LIST** on the SIRIUS MORE screen (FIG. 27 on page 17) to display the *List-Channel* screen, with the current channel displayed (FIG. 28).

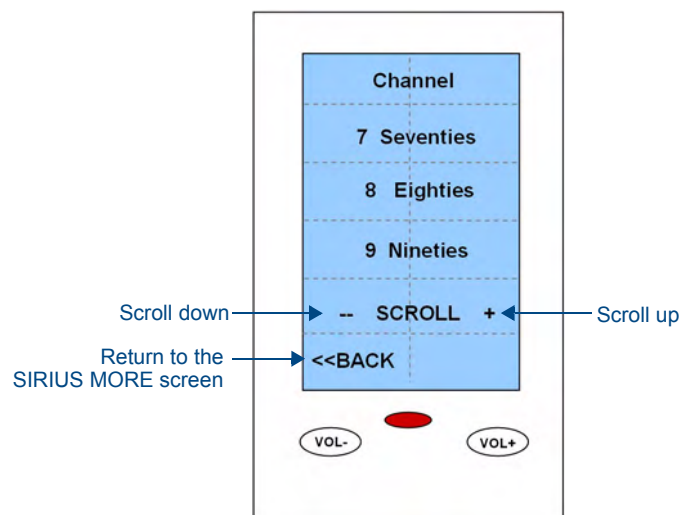


FIG. 28 LCD Keypad - SIRIUS List Channels screen

To scroll through the channels, touch “SCROLL +” or “SCROLL –”. When scrolling, up to 3 channels will be displayed

Touch any channel to select it. When the Channel is selected:

- The *SIRIUS MAIN* screen is displayed & the Channel selected begins playing.
- The *Channel #, Channel Name, Artist, Song Title* and *Composer* are displayed.

List - Category

Touch **CAT** on the SIRIUS MORE screen (FIG. 27 on page 17) to display the *List-Category* screen, with the current category displayed (FIG. 29).

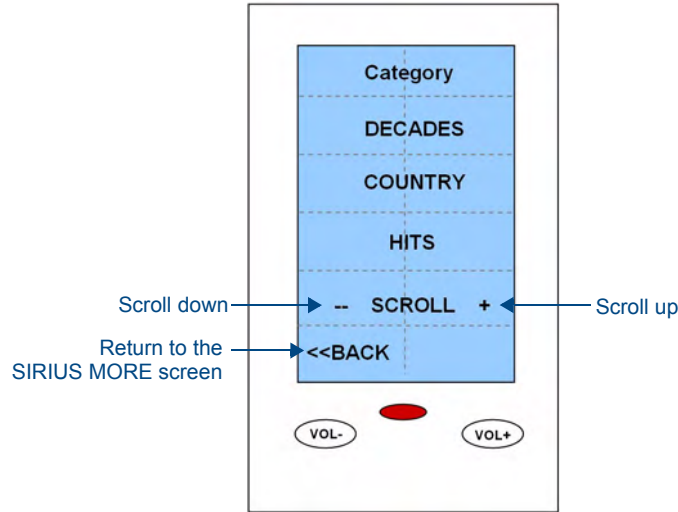


FIG. 29 LCD Keypad - SIRIUS List Categories screen

To scroll through the Categories, touch **SCROLL +** or **SCROLL –**. When scrolling, up to three Categories will be displayed.

To select a category, touch the category of choice. When the Category is selected:

- The *SIRIUS MAIN* screen is displayed, and the default Channel (set by the SIRIUS module) within the Category selected begins playing.
- The *Channel #, Channel Name, Artist, Song Title* and *Composer* are displayed.

SIRIUS - Presets

Users can set up to 10 presets per source.

1. From the *SIRIUS More* screen (FIG. 27 on page 17), touch **PRESET**, to access the *Numeric* screen (FIG. 30).

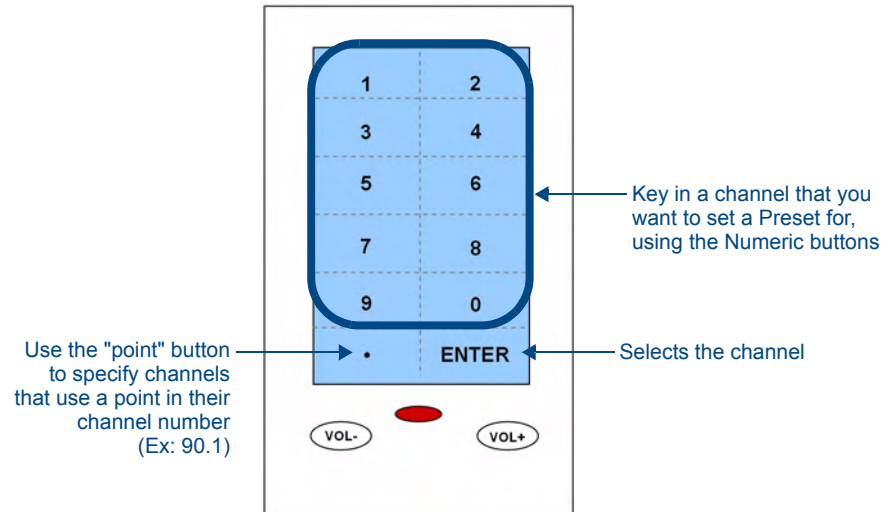


FIG. 30 LCD Keypad - SIRIUS Presets screen

2. Use the numeric buttons to key in the Channel.
3. Touch **ENTER**.
4. A *Preset* screen is displayed. Select the **Preset #** you wish to assign to the selected channel
5. To set another preset, repeat steps 2 – 3.

SIRIUS - Favorites

Favorites is a standard functionality of the Matrix Controller and is available for all sources.

One minute after an “ALL OFF” has been performed, or 10 Minutes after every zone/room has been turned off, the controller will send a Power OFF command to all sources.

The first time a source is turned on in any room (after a system power off), if a favorite has been set for that room and that source, the favorite station/channel will begin playing.

For example: A “favorite” channel of “7” is set in Room 1 for the SIRIUS source type. If Room 1 is the first room to be turned ON after a system OFF, Channel 7 will begin playing (whether it was the last channel played or not).

1. From the *SIRIUS More* screen (FIG. 27 on page 17), touch **SET FAV**, to access the *Favorites* screen (FIG. 31).

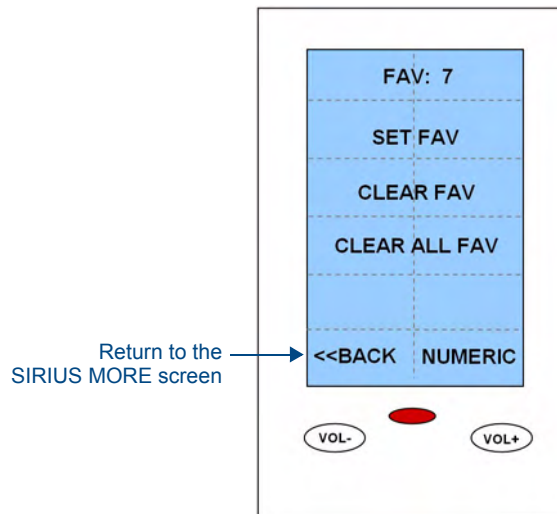


FIG. 31 LCD Keypad - SIRIUS Favorites screen

2. From the SIRIUS Favorites screen (FIG. 19), select **SET FAV**. A numeric screen will be displayed. Key in the channel to be set as the favorite, and select **ENTER**.

SIRIUS – Tactile Keypad

FIG. 32 shows the navigation button layout for Tactile Keypads.

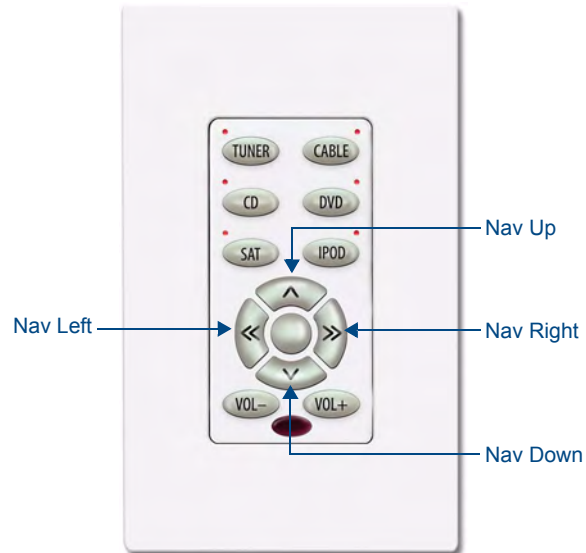


FIG. 32 Tactile Keypad

SIRIUS Source Control

When the Source type = *SIRIUS*, the navigation buttons perform the following functions:

NAV UP	NEXT Channel/Station (Ch 9, 10, 11 etc.)
NAV DOWN	PREV Channel/Station (Ch 9, 8, 7 etc.)
NAV RIGHT	NEXT PRESET (Preset 1, 2, 3...)
NAV LEFT	PREV PRESET (Preset 1, 10, 9, 8...)
NAV CENTRE	NOT USED
NAV CENTRE Hold	NOT USED

SIRIUS Messages

Overview

Messages specific to the DAS-SIRIUS tuner module that can be displayed on the Controller or LCD Keypad include:

Loss of Signal:	“Acquiring Signal”
Antenna Error:	“Antenna Error”
Subscription Updates:	“Subscription Updated”
Channel Map Updates:	“Updating Channels”
Invalid Channel:	“Invalid Channel”
Unsubscribed Channel:	“CALL 888-539-SIRIUS TO SUBSCRIBE”

- When first powering ON the Controller, and the user selects the *SIRIUS* source, the **Initializing SIRIUS** message is displayed, until the signal is detected.
- **Channel in Tuning** is displayed until the channel is tuned, then the standard SIRIUS metadata is displayed.



When initially powering ON the Controller, the display of metadata on the LCD Keypad may be slower until it is buffered by the SIRIUS module. Since the Controller is always ON, therefore, the SIRIUS module is always on, so this delay is only noticeable when first installing the Matrix Distributed Audio system.

SIRIUS ID Display

The SIRIUS ID can be displayed from two places:

- Controller > Setup/SIRIUS/ID
- LCD Keypad by keying in channel **0** from the numeric screen (or by tuning to channel **0** using the CH + / - buttons).

Invalid Channels

Invalid Channels will be automatically skipped when navigating channels via CH+/-.



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